

City of Chattanooga, TN
Personnel Class Specification

Class code 0594

FLSA: Non-Exempt

CLASSIFICATION TITLE: CHEMIST

PURPOSE OF CLASSIFICATION

The purpose of this classification is to perform technical functions associated with performing volatile and semi-volatile analysis of wastewater samples using a gas chromatograph/mass spectrometer to assure compliance with federal, state and local standards.

ESSENTIAL FUNCTIONS

The following duties are normal for this position. These are not to be construed as exclusive or all-inclusive. Other duties may be required and assigned.

Performs volatile and semi-volatile analysis of wastewater samples using a gas chromatograph/mass spectrometer; extracts semi-volatile compounds and concentrates semi-volatile samples.

Performs standard chemical, bacteriological and physical examinations to analyze samples as required by environmental agencies, department rules and regulations, plant regulations, and standard laboratory procedures for various parameters such as alkalinity, ammonia, biochemical oxygen demand, chemical oxygen demand, chlorine, cyanide, dissolved oxygen, fecal coliform, grease, lime, nitrogen, oil, pH, phenol, phosphate, silica, solids, surfactants, total organic carbon, total phosphates, and volatile acids; calculates results of analyses.

Prepares standard solutions and reagent solutions for use in analytical testing.

Calculates and records results of tests, including quality control/assurance tests.

Calibrates and tunes laboratory equipment; prepares equipment for use.

Operates a variety of machinery, equipment and tools associated with laboratory operations, which may include a gas chromatograph, mass spectrometer, purge and trap, analytical balance, autoclave, centrifuge, chlorine analyzer, cooler, dissolved oxygen meter, drying oven, furnace, heating elements, hot plate, magnetic stirrer, microbic analyzer, pH meter, scale, spectrophotometer, total organic carbon analyzer, water purifier, flow injection analysis system, microwave digestion system, pipettes, burettes, beakers, flasks, diagnostic instruments, and mechanic tools.

Performs general cleaning/maintenance tasks necessary to keep equipment and tools in operable condition, which may include inspecting equipment, troubleshooting equipment problems, repairing/adjusting equipment, replacing parts, washing/cleaning laboratory paraphernalia, decontaminating containers, and cleaning shop/work areas; monitors equipment operations to maintain efficiency and safety; reports faulty equipment.

Utilizes precautionary safety equipment and monitors work environment to ensure safety of employees and other individuals.

Monitors inventory levels of departmental chemicals, equipment and supplies; initiates requests for new or replacement materials.

Maintains records of testing results and laboratory activities in compliance with state reporting requirements.

Prepares or completes various forms, reports, correspondence, laboratory reports, calibration curves, charts, work sheets, sample sheets, chain-of-custody records, lists, or other documents.

Receives various forms, reports, correspondence, chain-of-custody records, logs, manuals, procedures, catalogs, reference materials, or other documentation; reviews, completes, processes, forwards or retains as appropriate.

Operates a computer to enter, retrieve, review or modify data; verifies accuracy of entered data and makes corrections as appropriate; utilizes database, spreadsheet, or other software programs.

Communicates via telephone and/or two-way radio; provides information; takes and relays messages; responds to requests for service or assistance.

Communicates with supervisor, employees, other departments, the public, and other individuals as needed to coordinate work activities, review status of work, exchange information, or resolve problems.

Maintains a comprehensive, current knowledge and awareness of applicable laws/regulations; maintains an awareness of new trends and advances in the profession; reads professional literature; attends workshops and training sessions as appropriate.

ADDITIONAL FUNCTIONS

Provides assistance to other employees or departments as needed.

Performs other related duties as required.

MINIMUM QUALIFICATIONS

Bachelor's degree in Chemistry; supplemented by three (3) to five (5) years previous experience and/or training that includes operating a gas chromatograph/mass spectrometer for volatile/semi-volatile analysis of wastewater; or any equivalent

combination of education, training, and experience which provides the requisite knowledge, skills, and abilities for this job.

PERFORMANCE APTITUDES

Data Utilization: Requires the ability to evaluate, audit, deduce, and/or assess data using established criteria. Includes exercising discretion in determining actual or probable consequences and in referencing such evaluation to identify and select alternatives.

Human Interaction: Requires the ability to provide guidance, assistance, and/or interpretation to others regarding the application of procedures and standards to specific situations.

Equipment, Machinery, Tools, and Materials Utilization: Requires the ability to operate and control the actions of equipment, machinery, tools and/or materials requiring complex and rapid adjustments.

Verbal Aptitude: Requires the ability to utilize a wide variety of reference, descriptive, and/or advisory data and information.

Mathematical Aptitude: Requires the ability to perform addition, subtraction, multiplication and division; ability to calculate decimals and percentages; may include ability to perform mathematical operations with fractions; may include ability to compute discount, interest, profit and loss, ratio and proportion; may include ability to calculate surface areas, volumes, weights, and measures.

Functional Reasoning: Requires the ability to apply principles of rational systems; to interpret instructions furnished in written, oral, diagrammatic, or schedule form; and to exercise independent judgment to adopt or modify methods and standards to meet variations in assigned objectives.

Situational Reasoning: Requires the ability to exercise judgment, decisiveness and creativity in situations involving evaluation of information against measurable or verifiable criteria.

ADA COMPLIANCE

Physical Ability: Tasks require the ability to exert very moderate physical effort in light work, typically involving some combination of stooping, kneeling, crouching and crawling, and which may involve some lifting, carrying, pushing and/or pulling of objects and materials of moderate weight (12-20 pounds).

Sensory Requirements: Some tasks require the ability to perceive and discriminate colors or shades of colors, sounds, odor, depth, and visual cues or signals. Some tasks require the ability to communicate orally.

Environmental Factors: Performance of essential functions may require exposure to adverse environmental conditions, such as dirt, dust, odors, fumes, temperature extremes, electric currents, burns, broken glassware, explosions, toxic agents, disease, or pathogenic substances.

Chattanooga, Tennessee, is an Equal Opportunity Employer. In compliance with the Americans with Disabilities Act, the City will provide reasonable accommodations to qualified individuals with disabilities and encourages both prospective and current employees to discuss potential accommodations with the employer.